Machine Learning Implementation for Stock Trading Project – By Rajib

1. **Data Preparation**

* Loading data
* Remove columns (unnecessary) like ActionTaken","Cap\_Size","IsOwner","Fund Name" etc.
* making classind as a last column
* Putting share value and stock price in front of asset turn
* Aging Manipulation as well as Creating Age Range instead of Aging
* Divide dataset into categorical, Numeric and Target
* Scale all numeric columns in a data frame.
* After scaling, making final data frame

1. **Grouping Data Frame**

* Remove columns with 100% NA
* Necessary data to apply model (High Fund Value)
* Remove columns depending 70% missing (NULL)
* Creating grp1, grp2, grp3 based on selecting same variables

1. **Model Building (Multiclass Classification with XGBoost)**

* Changing classind level -1 to 2 and 0 to 3
* remove zero variance variables
* Make split index
* split train data and make xgb.DMatrix
* split test data and make xgb.DMatrix
* K-folds Cross-validation to Estimate Error
* Confusion Matrix